

VIRGINIA WILDLIFE

MARCH—1952



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Photo by Harold M. Lambert Studios

MARCH OUTING

With the approach of spring and warming days the urge to venture out-of-doors once more becomes irresistible.

VIRGINIA WILDLIFE

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A Monthly Magazine for Higher Standards of Outdoor Recreation Through Wildlife Conservation

COMMONWEALTH OF VIRGINIA

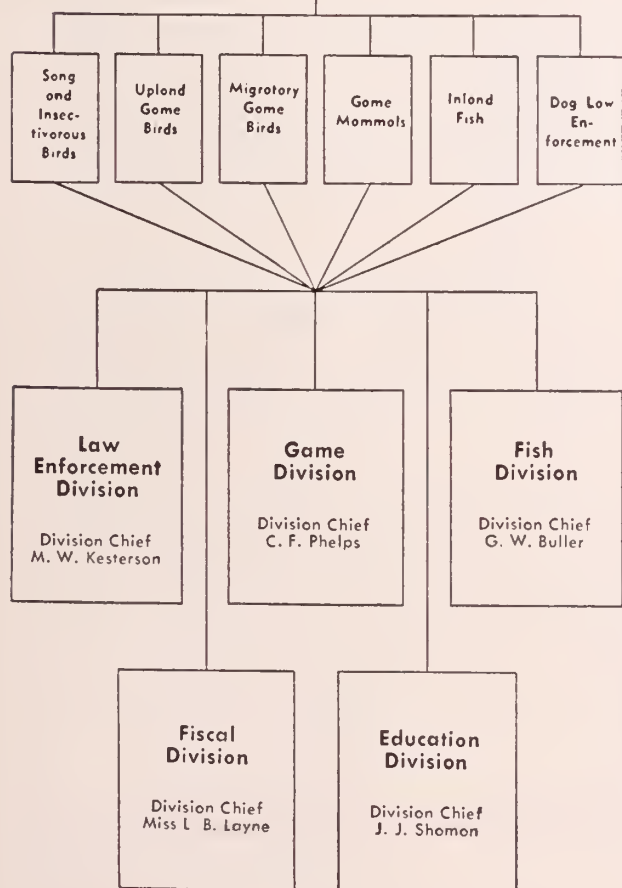


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Cover Photo

A pair of southern flying squirrels are caught by the high speed camera, as they began their night time activities in search of food and frolic.

Commission photo by L. G. Kesteloo

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE

SOILS — CONSERVE — WATER

FORESTS

Since wildlife is a beneficiary of the work done by State and Federal land-use agencies in Virginia, editorial policy provides for recognition of their accomplishments and solicitation of their contributions. Credit is given on material published. Permission to reprint is granted provided proper credit is given.

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WHO WANTS A BIOLOGIST?

By MAURICE BROOKS

Member, Conservation Commission of West Virginia



Professor Brooks

THIS QUESTION, sarcastically asked, was a sub-head in a recent article by an outdoor writer whose stories are carried in a number of West Virginia newspapers.

Well, the question, phrased as it was, made me mad, as I hope it did a good many others who are genuinely devoted to the cause of conservation in the state. The anglers of West Virginia (and the hunters, too) had better want biologists. If the remnants of our fish and wildlife are to be saved from encroaching civilization, it will be by the help and guidance of men who are trained to preserve them. Unless we have the aid of trained biologists, those who love the rod and gun will find their sport (in West Virginia at least) a disappearing and dying thing.

Who are these fish and wildlife biologists? Young men, for the most part, who have lived in the woods or along the streams, and who have so abiding a love for the outdoors and its resources that they have chosen to devote their lives to its betterment. They find their sport, even as many others do, in fishing and hunting, and they will hold their own with the experts when it comes to filling bag or creel. They differ from other sportsmen in that they must either do a good job, or be out of one. For them, improved hunting and fishing is not a matter of sentiment alone—it is also their bread and butter.

Doctors, so we are told, make mistakes, and bury them. Yet when you and I get sick we call a doctor. I don't see many newspaper columnists attacking the medical profession. Lawyers can't all be right, since someone has to lose cases, but when we get tangled up with the law we want the best legal advice available. We have had preaching for a good many years, yet rumor has it that some sinning remains in the dark corners. Still, not many people are calling for the abolishment of the ministry. The profession of wildlife or fish biologist is new, and its followers, like other human beings, have made their mistakes. Nevertheless, in correcting the mess that others of us have made of our natural resources, they are our one final hope.

The biologist, by discovering hitherto unknown facts of life history and habits, has made the Tennessee Valley lakes an angler's wonderland. Closer home, the fish biologists are showing us how to manage our newly-constructed farm ponds so as to secure phenomenal yields. I have just returned from a trip through our mountains, and have seen, first hand, some of the plans already drawn for improving our trout streams. The good work is going forward, but it is not being helped by those who choose to belittle it.

It is cheap and easy to make fun of people whose ideas differ from our own. Any writer or speaker can secure a following of sorts by deriding the "technicians." Yet, I am firmly convinced that those who do so are not serving the sport which they profess to love. The right to criticize is inalienable, but arguing by personalities is the way of Communists and Nazis. It has no place among a people who cherish good sportsmanship.

Who wants a biologist? I, for one, want the best we can get, and I pray God that other citizens of West Virginia will agree.

—Courtesy of West Virginia Conservation

Fish and Game Work of the Southern States

By CLARENCE W. WATSON

FROM VIRGINIA, Kentucky, and Arkansas on southward to the Gulf is our Southeastern Region. Here, in a climate that is benign for man and beast are the many forms of wildlife that lure the lucky dweller of this land into the field. Scratch the surface of any community in the South and you'll turn up a lot of folks ready to quit and go fishing or grab the gun. But sometimes it looks like the hunters are increasing lots faster than the game. Then, the fish and game department catches heck from the sportsman. Here's where Federal Aid puts its shoulder to the wheel.

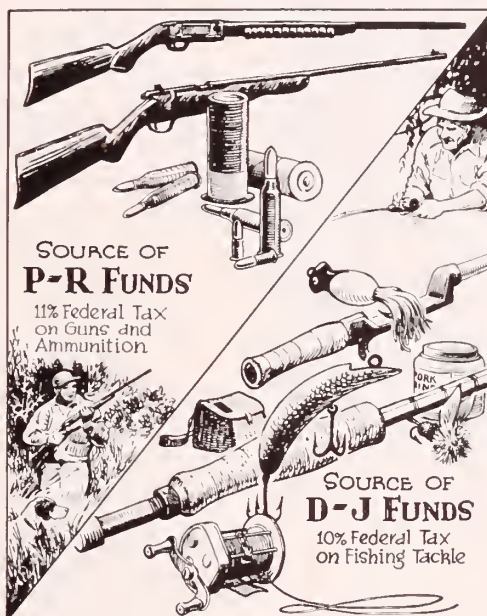
In wildlife language Federal Aid means the Pittman-Robertson game program, now 13 years old, and the Dingell-Johnson fish program which started this year. Both channel much-needed funds into our state fish and game departments. This year the P-R (Pittman-Robertson) tax on sporting arms and ammunition brought to our region over three million dollars of federal money. Virginia's cut was more than \$318,000. The D-J (Dingell-Johnson) tax on sporting fishing tackle brought almost a half million dollars to the region and over 40 thousand dollars to Virginia. From these funds the states finance 75% of the cost of their Federal Aid projects.

The transfusion of these annual grants into the fiscal veins of our state game departments gave them a new vitality. Before P-R, our state game activities were almost wholly limited to law enforcement and quail hatcheries. But the P-R "shot-in-the-arm" brought a new era of technical game management. Lands were purchased and developed with food and cover. Deer and turkey were stocked on ranges where these species had long been absent. Research projects were carried out to show the proper meth-

ods. Staffs of wildlife technicians were acquired to do the work. The "business" of game management in our region was born—a rather anemic infant at first but now a lusty youth of much promise. Land has been purchased with P-R funds in large tracts and in all of our states except one. To date, 377,500 acres of game lands have been acquired, and this continues at a rapid pace. Individual tracts run as high as 100 square miles in area. For the most part, they are designed to restore deer, turkey, quail, and waterfowl, and to provide places where the public can hunt these species. The prices paid for such lands averaged six dollars per acre. Most of them would sell now for several times the purchase price. Moreover, receipts from timber, farm crops, and other products compatible with wildlife management can frequently to a large degree pay for the game operation.

The acquisition and development of a statewide system of game-management areas for public hunting is an increasingly popular use of P-R funds. However, limited funds and greater difficulty in consolidating large holdings curtails the acquisition of state-owned lands for public hunting. So now,

the states are entering into agreements with large private timberland operators to develop the game and control its harvest on such lands. The owner gets protection from fire and trespass. The state gets the right to stock game, protect it, develop food and cover, and control hunting. It's a good deal for both parties. Similar cooperative agreements with the U.S. Forest Service, TVA, Army Engineers, and the Soil Conservation Service make large game land areas available to state fish and game departments. The operating projects usually involve P-R and they affect about seven million acres in this



The source of federal aid monies.



Commission photo by L. G. Kesteloo

The acquisition and development of a statewide system of game management areas for public hunting is an increasingly popular use of Pittman-Robertson funds.



Photo by Arkansas Fish and Game Commission

Planting of bicolor and sericea lespedezas is carried out through Pittman-Robertson in all the Southeastern states projects.

Compared with quail, deer restoration is relatively simple. Restocking and protection are rapidly bringing deer back in the Southeast.

Photo by American Museum of Natural History



Southeastern Region. For the most part, such areas are devoted to deer and turkey management. Squirrels are another angle, and in some states the ruffed grouse comes into the picture.

Some effort has been made in six states to provide quail lands, by purchase or lease, for public hunting. Florida's 65,000-acre Charlotte County project is the outstanding example. Purchased, studied, and developed with P-R funds, this is a successful public quail area. But, the acreage required to satisfy a quail hunter and the development costs entailed are far greater than the amount of land and money needed to satisfy the deer or turkey hunter. Each quail hunter wants to shoot several bags of quail during the season. Deer hunters are satisfied if one hunter out of four or even ten kills a deer on one hunt per year. Consequently, public shooting grounds for quail are few in number. They are valuable to demonstrate efficient quail management practices. However, as far as quail go, most of our states prefer to invest their P-R dollars in farm game habitat projects.

Since our quail are, for the most part, associated with farming areas, any statewide quail improvement program must deal with the problem of how to improve quail production on thousands of farms throughout the state. To be successful, any practice must have a dual value. It must increase the carrying-capacity of the land for quail and at the same time appeal to the farmer as being beneficial and practical for his farm. To reconcile these two requirements is far from easy.

At present, the planting of perennial lespedezas—sericea and bicolor—on field borders is the favored practice. The sericea furnishes good quail cover. Bicolor is an excellent food. Both plants improve the soil and control erosion. Moreover, the sericea makes good forage and hay. This type of project is conducted under P-R in all of the Southeastern States. Last year these particular projects cost about one-half million dollars and borders amounting to a total length of 2,700 miles were planted. Quail use of these lespedeza strips is very high. However, we need to know to what extent the plantings actually increase the numbers of quail on a farm. P-R research projects in four states are studying this problem now.

Compared with the quail problem, deer restoration is relatively simple. Restocking and protection are rapidly bringing deer back in the Southeast. Between 1920-1930 our deer were at their lowest numbers. In many parts of the South people had never seen a deer. Thanks to restocking projects, the deer is again becoming a familiar animal.

Under P-R projects about 10 thousand of them have been stocked in depleted ranges. Arkansas and Virginia have been most successful in restoring good deer hunting to their sportsmen.

Throughout the Southeast deer stocking is a major activity. The animals are secured either by purchase outside of the state or by live-trapping within the state. Most of our states live-trap where deer are plentiful, but they purchase deer to supplement the numbers. Arkansas has had much success with deer trapping. One year they obtained over 500 animals at a cost of \$15 each. Virginia has done an excellent job with purchased deer. In any event, deer are increasing throughout the South and the current population of one-half million might well be raised to three million with proper restoration measures.

Keen interest is devoted in all of our states to P-R turkey restoration projects. These involve the stocking and protection of turkey refuges accompanied by the planting of favored foods. In most states wild birds are trapped where plentiful and transferred to special areas. Well over 600 such birds have been trapped and relocated. Virginia's annual turkey liberations are the largest in our region. A high quality of pen-raised bird is used. Louisiana also releases large numbers of pen-raised turkeys, purchasing them from dealers in Pennsylvania and West Virginia. Where obtainable the truly wild turkey is to be preferred. The pen-raised birds show some promise, but their value in restocking remains to be proven.

The eastern wild turkey is much more difficult to increase than is the whitetail deer. Turkeys are more demanding of wide range, of freedom from disturbance, and of suitable habitat. Valuable research in Alabama and Virginia has pointed out some effective measures to be used with turkeys. However, we are still far from an understanding of the bird's essential needs. The turkey population of the Southeast is now estimated at about 140,000 birds. They are said to be increasing in Florida, Kentucky, and Mississippi. North Carolina reports a decreasing population, and some states are doubtful. A note of optimism is struck in the adaptability of the bird to a land use economy in which timber production and cattle raising are combined. Turkey populations are high on large timberland holdings of this type in southern Alabama. A P-R research project in this section is now studying this situation.

All of our states are interested in waterfowl. Through P-R survey projects a regionwide search has been made for areas suitable for development as refuges and hunting grounds for ducks and geese.

(Continued on page 22)



Commission photo by L. G. Kesteloo

Keen interest is shown in Pittman-Robertson turkey restoration work in all the Southeastern states. Virginia's annual liberations are the largest in the region.



Photo by Arkansas Fish and Game Commission

Virginia has acquired the excellent Hog Island Refuge on the James River as a development and holding area for waterfowl.

The Southeastern states now have 20 fisheries projects approved under the new Dingell-Johnson fish restoration program. Many are research projects.

Photo by James E. May





Commission photos by Kesteloo

Long before the swollen, biscuit-shaped buds of the dogwood burst into bloom, kids and oldsters alike begin fishing for panfish.

*March is the month of awakening—of moods—for both fishermen and fish.
For maximum early spring enjoyment why not try your hand at panfishing*

THE ANGLER'S URGE, really a sort of pleasant rash, breaks out among Virginia's fresh-water fishermen long before the first buds of spring. Just a few sunny days, and small boys start to bend pins and get sewing cotton from their mothers to fashion fishing tackle. Long before the first dogwood blooms, when one can go barefooted and go swimming, the fish worms are doing business.

Many of the grownups have stayed up late in the winter nights tinkering with feathered contrivances, or studying the latest theories about how to string worms on a hook, or how a grasshopper can be made to look like a grasshopper that hasn't got a hook in it. The rash gets them all, youngsters and grownups alike. They are all itching to get out after what we commonly call panfish.

Just let the thin ice around the edges disappear, and they'll be out. The panfish stir early, and so do the fishermen. Just let the temperature of the water come up a degree or two, and the panfish start looking around for spawning places. They are hungry and will snatch a meal while doing so. Silver perch or crappie are among the first of our panfishes to leave their winter quarters.

When we go out in early spring for panfish, we

normally think in terms of the sunfishes, of which there are many variants. Bass, bream, longeared sunfish, yellow-bellies, silver perch, flier and the warmouth, all are sunfishes. Ring or yellow perch, which also stir early, are the best-known members of the true perch family. Blue-nosed perch, landlocked in many of the ponds, is a salt-water fellow, as are the grand big shad which come into fresh water to spawn.

Early in the spring many also go out with dough-balls, chicken innards and other enticements for carp and catfish, which can hardly be classed as panfish. Then there is the fallfish which grows big in our eastern Virginia streams and will take any kind of lure a trout will take, and the eastern chain pickerel, which we call pike, but which too is not a panfish.

Bluegill bream are perhaps the most sought-after of the panfishes. They are numerous, and they are cooperative. Silver perch, or crappie, where they are plentiful, run a close second. Both of these fine species of panfish start moving around long before the dogwoods are anywhere near in bloom. They stay deep until the water becomes really warm—warmer than ice-cold—and the hosts of Virginia

anglers know what to do about it.

They fish with natural baits, and fish them deep, until the fish actually make their way into the shallows. For silver perch, they give the little minnow a workout. Some of the ultra-smart anglers rig up an outfit and cut the line above the cork. If a silver perch takes the minnow, he will probably swim back where there are others of his kind, for silver perch, in springtime, are almost always found in schools.

The angler for bluegills expects to find them deep when the waters are still icy and lays his plans accordingly. How delightful it is when he finds that the bluegills have actually left the dark recesses and are acting up in the shallows, as they are counted upon to do later. The fly fisherman sticks to his wet flies—with maybe spinners ahead of them—until the day arrives, to his delight, when he finds that the bluegills will rise to the surface lures.

The day may come earlier than we think, when the panfish will be acting up as they will unquestionably be doing a little later, depending upon whether there is an early or late spring. Warmth means a lot more to fish than to fishermen. Lots of the anglers will be out with their duck-hunting parkas coming in handy. The urge to go fishing is strong upon us.

When we gather up our fishing tackle in early

Typical scene is this freckled faced youngster out for an early session with the prince of panfish.



spring, nobody is thinking in terms of bass or mountain trout, for there are certain periods in which they are protected in their spawning, and nobody wants particularly to catch them except when going specifically for them in legal season. The panfish are interesting enough. And let's not forget the branch minnow, which has probably caused more delight among more small boys than any other fish we have.

And speaking of branch minnows, and panfish in general, one of the most vivid recollections of this writer's early life was when he and another boy planned a horse-and-buggy trip to the South Anna River. Plenty of effort was expended in advance in getting the necessary minnows from the spring branches for bait. Alas, the river was muddy and we couldn't fish in it at all. So we got out the frying pan and a few strips of bacon we had brought along. Our bait minnows proved about as savory morsels as we have ever tasted since.

While early spring fishing has its fascinations for all conceivable varieties of fishermen, it is particularly attractive to the hordes of anglers who have taken up fly fishing. Lots of these fellows have been practicing casting, tying knots, or even fashioning their own lures during the winter and they are champing at the bit for a chance to try out their gear.

Some take off their wet flies when results are disappointing and substitute a hook and a gob of worms. This will make fish leave home if nothing else will. But the water has got to be mighty cold for panfish not to be interested in a well-tied and well-manipulated wet fly. One of white or with white in it, resembling the belly of a little minnow moving through the water, is a logical enticement. But, perversely, a solid black fly is deadly for bream in early season. Nobody knows what a bream thinks a black gnat is.

The waters soon warm up in our climate, and the panfish find their nesting places and start sweeping out their spawning beds. It is then that the fly fisherman with surface lures has the picnic of his life. It is not covering too much territory to declare that little surface bugs or dry flies properly fished under these conditions will come nearer providing a mess of fish than any other scheme we know of, with the possible exception of a net.

The spinning outfit, coming more and more into common usage, is at its maximum of usefulness in fishing for the panfish in early spring. A lot of water can be covered with the wet fly or spinner, and the same can be said of the devices employed

(Continued on page 22)



Within 15 to 20 feet of a woodland there is a sapped strip of land which returns little or nothing in crop yields. If planted to bicolor, it will pay its way in wildlife crops.

Let's Plant Those Idle Acres

By ROBERT R. BOWERS

Commission photos by L. G. Kesteloo

TRADITIONALLY, the state of Virginia is a farming state, boasting of some 175,000 farms that encompass well over 25,000,000 acres of land. That's a lot of acreage—sure. But do you realize that nearly 700,000 of these acres are going to waste—idle acres serving no useful purpose. Idle land is a symbol of waste, and so often, a testimony of abuse. It denotes poor land management, and adds nothing to farm income. It is a shameful commentary upon our way of life. If we are ever to realize the full potential of our Virginia farmlands, then *these idle acres* must be put into production and made to work.

Even the most uninformed novice can readily recognize eroded fields, decaying farms, and barren lands, but it takes a "bit of lookin' " to see the less obvious forms of idle acres on the farm. If you're a landowner, and expect *all* of your land to pay dividends, then it would be well for you to survey your land with more than a passing glance. Your precious time and energy may be spent cultivating, planting, and harvesting crops, hardly sufficient to pay for the time and energy allotted to their nurture. To bring out the point, let's take an average farm and look it over more closely.

On farms where cropfields border woodlands there is a sapped out strip of soil that returns, in crop yields, exactly nothing. Then there is that strip of land between the fence and the road, which is usually cut to the ground for beauty's sake. This is waste, and although this area once held but a rabbit or a covey of quail, it now holds nothing. Then again, many odd areas, serving no useful purpose in the way of adding to farm income, are cropped

or burned. Why? Neat, fertile farms, trimmed to the bone of all natural vegetation are as barren of wildlife as eroded unfertile acres. Wouldn't it be better to leave these wildlife havens as they are, or better still, plant them to food and cover plants and have a rabbit or a covey of quail than to have a neat looking farm with nothing on it in the way of wildlife? Life itself is beautiful, especially life that moves. Variety breaks the monotony of life. What better way could this monotony be broken than by the thrill-packed scattering of a covey of birds or the sight of the wily cottontail bouncing across the lawn.

You may ask, well, what does this mean to me? How am I concerned? Every acre of idle land put into vegetation is one more acre protected against erosion, and, planted eroded areas become productive once more. But if you plant that acre, why not do it with a type of plant that serves a double purpose, with plants that not only prevent erosion but also provide excellent food and cover for birds and rabbits. Vegetation is nature's own weapon against soil erosion. Man has yet to find a better one.

If you live in the Southeast, and you want to make an investment in quail and rabbits, you can do it without taking a single acre out of crop production. All you need do is plant *those idle acres*. What should you plant? Well, why not plant bicolor lespedeza and/or sericea lespedeza, separately or in combination, since they have proven excellent wildlife foods in Virginia. Simple? Of course, it is; and where growth begins it will give you a feeling of self-satisfaction when you begin to see *those idle*

acres once more in production. A pound of rabbit or a pound of quail is just as filling and just as tasty as the best corn-fed pork, or beef grown on the most fertile of pastures, and that rabbit or quail will be coming from land which at the present time is producing nothing. You pay taxes on that land. Why not have it pay you back?

How To Get Plants

The Commission of Game and Inland Fisheries furnishes wildlife planting material to interested landowners and sportsmen in the state each spring. Through its Pittman-Robertson farm game program the materials are furnished, without charge, in order that the idle lands may again serve a worthwhile use in the form of producing an increased wildlife crop, quail and rabbits in particular. All that the Commission asks of the landowner is that the seeds and plants which are supplied be planted and cared for in such a way as to produce the maximum benefits to wildlife.

The Commission, in cooperation with the Soil Conservation Districts throughout the state, is interested in helping landowners, sportsmen, and all interested groups to improve the food and cover for wildlife by planting wildlife borders and food patches. It is only through such a program that permanent improvements can be made in wildlife habitat. More food and cover means more game for the hunter and fewer acres of idle land.

Planting material can be obtained by making application with your local soil conservationist, county agricultural agent, county game warden, or district game technician. These men will see that the materials are delivered to you in time for planting

in the spring. February 15 was the deadline for applications for planting material this spring, but it is not too late to survey your land for locations which can be planted next spring.

Plants Available Upon Request

The Commission makes an assortment of plants and seeds available to the public upon request; some of which are shrub lespedeza plants and seeds, sericea lespedeza seeds, wildlife seed mixture, composed of soya beans, cow peas, millet, milo, and Korean lespedeza, and milo maize.

Ranking highest among these plants, as to wildlife benefits, are shrub lespedeza and sericea lespedeza. These two plants have proven their worth throughout the Southeast as dependable quail and rabbit food and cover plants, and they are preferred by most biologists who have charge of making wildlife food plantings.

Where and How To Plant

Soil conservationists surveyed 3,500 fields in the Southeast and found that for an average distance of 33 feet from woodland edges the land produced less than half the normal crop. An average strip of land 12 feet wide was uncultivated, thus a strip 21 feet wide has been plowed, planted, and fertilized, which did not even return enough to pay for the money and time spent on its preparation.

A border of legumes planted in such a situation will have utility for the farmer and improve conditions for quail and rabbits. Its main values are that it will prevent erosion in field margins and provide a space in which to turn implements at the end of the field. The thick growth of legumes pre-

Technical advice on where and how to plant is given free of charge by the Commission's game technician, and soil conservationists.



A finished product. Cultivated crops grow up to the bicolor, and the bicolor forms a buffer zone between the woodland and the field.



Idle areas between woods and farm ponds can be effectively planted to bicolor lespedeza, thus enhancing esthetic, recreational, and wildlife values.

vents the spread of shrubs from the woods into the open land.

A fifteen-foot strip of shrub lespedeza (*Lespedeza bicolor*) makes an excellent border for woodlands. If crop rows extend into it, the border should be widened by an additional fifteen-foot row of sericea lespedeza. Farm machinery can be turned on the sericea and it may be cut for hay. Bicolor makes a shrub 10 feet tall under favorable conditions.

Virginians who are interested, and want to invest in quail, should plant a 400-foot strip (5 rows 3 feet apart) of bicolor along any brushy cover or through open pine woodlands. Biologists of the Soil Conservation Service have determined that this is about the size planting (one-eighth acre) required to support an average covey. Eroded gullies, cut over lands, and idle fields likewise present outstanding opportunities for landowners to increase the production of their lands by planting erosion-control wildlife plants.

The Pay-off

To plant an eroded gully is to put antiseptic on

a wound, in the hope that it may heal quickly. All of us know that we cannot do our best work when we're sick—well, neither can the land. Sick land makes sick people. Think what it would mean if every farm in Virginia—175,000 of them—devoted but one acre each to wildlife food plantings! Spread out in one-eighth acre plots, and figuring the amount required for each covey of quail, this would mean 1,400,000 plantings throughout the state. And let's suppose each planting was made on land prone to erosion or on eroded land. Could it be that soon there would be sufficient "birds" for all to hunt? And could it be that our rivers might flow clear again? Maybe such thinking is too far-fetched, but then who can say that it cannot be accomplished unless an attempt is made. Surely it is worth trying. If you're one of those landowners who has an extra acre or two that's just idling away, or that's beginning to show the fuzz of erosion, why not do something about it this spring. What have you to lose? Nothing. To gain—everything. Be it farm crops or wildlife crops, every acre should be in production. So let's plant *those idle acres*.

CONSERVATION LICENSE PLATE ATTACHMENT OFFERED BY COMMISSION

The Virginia Commission of Game and Inland Fisheries is offering a beautiful multi-colored conservation license plate attachment as a premium for two *new* one-year subscriptions to *Virginia Wildlife*, or one *new* three-year subscription.

This offer will become effective March 1, 1952, and will expire on June 1, 1952.

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

FINAL TALLY ON STATE'S DEER-BEAR-TURKEY KILL RECEIVED: A final report on the total kills of deer, bear, and turkey in Virginia during the 1951-52 hunting season has been compiled. The total deer kill in the entire State was 7514, with 4089 killed in the area east of the Blue Ridge, and 3425 killed west of the Blue Ridge. Sussex County led in the east with 650 deer, and Southampton County ran second with 322. Augusta County led in the west with 541 kills, and Shenandoah County ran a close second with 512.

There were 2129 turkeys bagged in Virginia, with Buckingham County out in front with 143 kills. Spotsylvania County was second with 121. Along with these reports came figures on the bear-kill, which was 148 for the entire state.

POWHATAN STEPS FORWARD IN WILDLIFE CONSERVATION: Realizing the pressing need for the conservation of our wildlife resources, the Powhatan County Board of Supervisors, at a morning session February 4, appropriated funds to purchase a tractor and a bush and bog disc, for the sole purpose of aiding landowners make food and cover plantings for wildlife, according to C. P. Montgomery, conservation officer for the Commission.

The board, made up of Wyatt Sanders, Martin Michaux, and Sam Bonifant, was encouraged to take this action by conservation officer C. P. Montgomery, E. F. Yates, former representative of the House of Delegates, and others interested in wildlife conservation. The Board of Supervisors will cooperate with the Commission of Game and Inland Fisheries, which will furnish the planting materials for the wildlife plantings, and they will give instructions and general advice on the project. This action by the Powhatan County Board of Supervisors not only represents a step forward in actual wildlife conservation, but likewise shows the development in the thinking and consciousness of Virginians to the problems of wildlife and the place it holds in the economy of any wise land-use program.

RABIES IN VIRGINIA HIGHEST SINCE 1944: "During 1951 Virginia had its highest incidence of rabies since 1944, with a total of 223 cases of animal rabies reported," according to a recent report submitted to the Commission by Dr. Mack I. Shanholtz, State Health Commissioner.

It is generally known that the dog is the most common transmitter of rabies, but the occurrence of the virus in foxes makes it of particular significance in the wildlife field. Sections hardest hit during the past year were Fauquier and Loudoun counties in northern Virginia; Lee, Washington and Wythe counties in southern Virginia; and the City of Richmond. With this report comes startling information from the State Health Department that 1952 is well on its way to being another bad year for rabies in Virginia. During January, 26 cases of positive rabid foxes were reported from the three northern counties of Fauquier, Loudoun, and Warren. One case has been reported, thus far, from Wythe County. It is interesting to note that during 1951 there were 38 cases of rabid foxes reported from Fauquier County; six were reported during last January. There were 19 cases in Loudoun County in 1951; in January there were six. And during 1951 there were two cases reported in Warren County, and in January there were 14. The majority of foxes found rabid have been grays, but some were reds. Many more cases of rabid foxes have been reported but the figures listed are only those definitely proven rabid by the State Health Department.

ESSAY CONTEST GOAL OF 100 COUNTIES NEARED TOP: Over 225 schools, from 91 of Virginia's 100 counties, entered the 1951-52 Fifth Annual Wildlife Essay Contest jointly sponsored by the Commission of Game and Inland Fisheries and the Virginia Division of the Izaak Walton League of America. Officials had hoped that 100 per cent of Virginia's counties would have at least one school entry before the contest closed February 28. The 90 counties represented in the contest showed a notable increase over the 56 counties which were represented in the essay contest last year. Contest officials of the Commission and the League believe that the Conservation Essay Contest, now in its fifth successful year, is one of the soundest methods of getting conservation across to our young citizenry—and urged teachers and parents to have their children enter.

"COON HUNTIN"

For Pleasure and Conservation

Each year for a number of years the Tidewater Coon Hunters Association has hunted raccoons for recreation and for the profit to the state. Captured 'coons are turned over to the Commission for restocking in parts of the state which have little or no 'coon population.

Commission photos by Kesteloo



1. Members of the Virginia Coon Hunters Association as they line up in readiness for the hunt.



3. It's all a man can do to hold the hounds when they know there's "coon to run in the swamp."



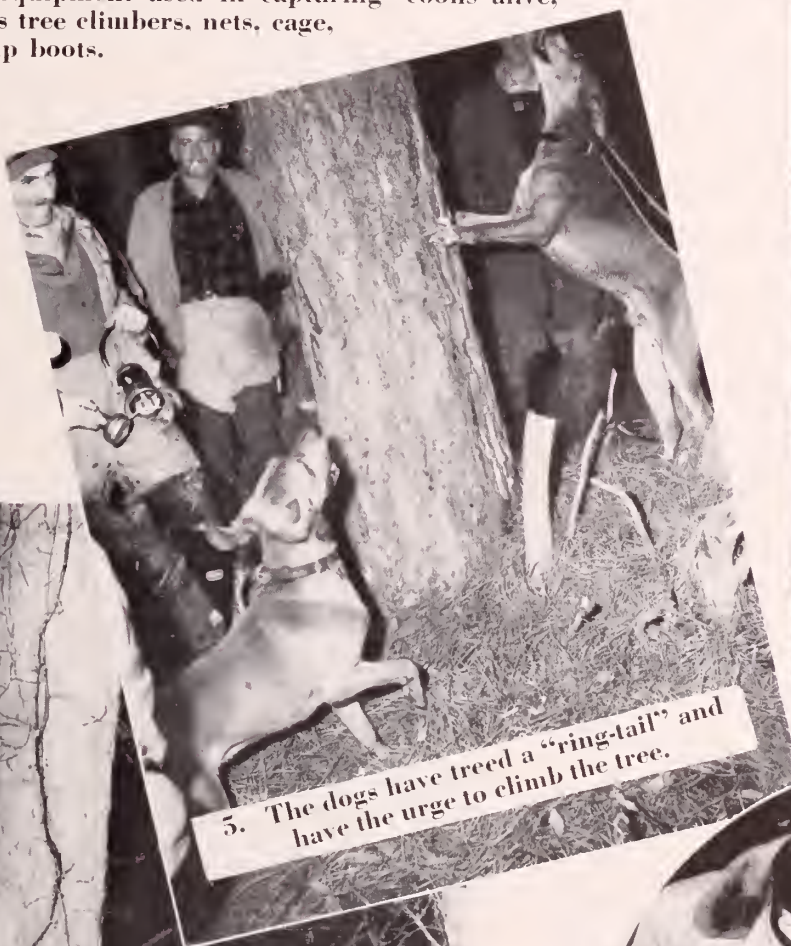
4. Muck and debris make up a great part of the swamp where the 'coons live, and this man walks cautiously.



2. Some equipment used in capturing 'coons alive, such as tree climbers, nets, cage, and hip boots.



9. Sometime later the 'coon is transferred to a car and given a free ride to its new home.



5. The dogs have treed a "ring-tail" and have the urge to climb the tree.



8. After the hunt, members enjoy their traditional oyster fry.



6. Climbing the tree after dark is risky business. Hunter proceeds slowly as excitement mounts.



7. Bill Murphy, association member, takes 'coon from cage and transfers it into holding crate

The CONGO EEL

A remarkable member of the Virginia fauna.

By JOHN THORNTON WOOD

Commission photos by Kesteloo

FISHERMEN of the fresh-water swamps, ponds, and streams of southeastern Virginia sometimes encounter a bizarre, snake-shaped creature with the slimy skin of an eel, and four extremely short legs. When they try to find out what they have caught, they get a variety of answers, for the Congo eel is also known as the poison eel, deaf adder, ditch eel, black eel, blind eel, lamper eel, and Serpent of the Congo. All of these names show that people think the Congo eel is either some type of eel or snake. It is neither fish nor reptile,—it is an amphibian! This is the class of animals which include the frogs, toads, and salamanders. It is Virginia's longest salamander, exceeding the "Hellbender" of the southwestern counties by more than a foot, to reach a maximum length of more than three feet.

Fishermen often are told that Congo eels are poisonous, but this is a myth. Congo eels feed by cornering crayfish in their burrows, and also on carrion, but have no venom apparatus to assist in the capture of their prey. This doesn't mean that Congo eels are harmless, for they have small sharp teeth. When fighting for their lives, after being pulled out of a swamp pool by hook and line, they thrash violently, and try to bite the nearest object. One Congo eel wound was reported to have been so severe that it left a scar which remained for seven years. Such wounds are rare, though, and cautious fishermen run little risk of this type of injury. Congo eels mind their business and don't look for trouble; the reported bites were caused by cornered or injured specimens.

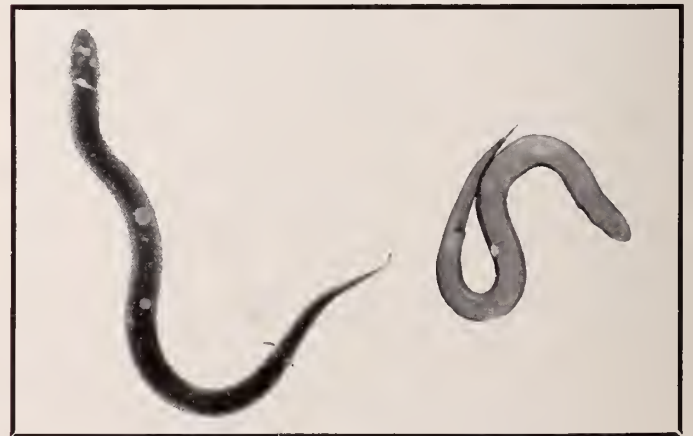
These snake-shaped giant salamanders live in swamps, ponds, and ditches. They are rarely found in muddy waters, but occur in "black" waters of cypress areas like Lake Drummond in the Dismal Swamp. They are now known from nine southeastern Virginia counties: Brunswick, Elizabeth City,



Head and body of Congo eel.

Greensville, James City, Nansemond, Norfolk, Prince George, Princess Anne, and Warwick. They have been reported from Chesterfield and Goochland counties, but these records are not backed by preserved specimens. The Goochland record is probably in error. They may be expected in Surry, Sussex, Southampton, Isle of Wight, and possibly in York counties. Virginia Congo eels are reported living in crayfish burrows on stream bottoms, and are also found in swamps under logs, among cypress roots, and in dense weed patches. By day they remain under cover, concealed from their enemies. By night they can often be found in large numbers in some states. They have never been found in large numbers in Virginia.

Little is known about the feeding of these creatures, but enough to assure fishermen that they don't thrive on game fish. Apparently their chief food consists of crayfish, but worms, small clams, and frogs are also eaten. They probably eat whatever they can catch, and in captivity have eaten young bowfin. Captive Congo eels in the biology department at the College of William and Mary have fed



Dorsal view of Congo eel (left). Ventral view of the salamander (right).

on beef for years. In these days of inflated prices horsemeat was offered the eels as a substitute, and the eels would snap up the horsemeat, hold it in their jaws without attempting to swallow it, then spit it out and refuse to feed until strips of beef were provided.

Congo eels live many years. Their life span in a laboratory tank is not good evidence of their normal life span, for they are protected from their enemies, the mud snakes. In captivity one Congo eel lived for 26 years; the two at William and Mary have survived in the biology department for 16 years, and were full grown when they were donated in November of 1935.

Congo eels reproduce like other salamanders. Fertilization is internal, and several months after fertilization eggs are laid. In North Carolina, strings of eggs have been found in July. The mass of eggs is as large as a man's fist, and is usually under a log or stump in a temporarily dried-up swampy area. The egg-mass consists of two long strings of eggs, each from four to eight feet in length. Individual eggs are the size of large peas, and are spaced about a half-inch apart on the string. No nests are known to have been found in Virginia, but when one is found it is probable that the female will be found coiled around the eggs.



Ann Headlee, secretary in Commission's education division, feeds a Congo eel its weekly ration of pork liver. (Circle) Eel strikes hard at strip of liver.

Early observers described the "voice" of the Congo eel, calling it the first voice developed in the animals with backbones. Scientists today regard the sound produced by the Congo eel as accidental, resulting from their sudden expulsion of air as they are lifted from water. This rush of air, forced through openings in the sides of their heads, produces a sort of whistling chirp.

The widely-used name blind eel suggests the widespread belief that these salamanders are blind. This is probably true of adults, although younger specimens have better developed eyes. Even in adults the eyes are still active as light detectors, helping the eel to determine when it is safe to come out of hiding to hunt a meal.

Adult Congo eels breathe with lungs like all the reptiles, birds, and mammals. Larval Congo eels obtain oxygen from water with gills the way fish do. It is usual for larval amphibians to differ from adults in this striking manner.

Congo eels are caught by fishermen, or by "ditchers" working near swamps. Scientists seeking them have their best luck when searching at night using jacklights. One observer reports success in luring them from crayfish holes by wiggling his finger in front of the entrance! Congo eels have so little sight it is not likely the finger was observed, but the slight disturbance of the water may explain why this odd technique works. Most Congo eels for scientific use are gigged with sharpened prongs carefully being passed on either side of the backbone to avoid fatal injury to the animal. In this type of collecting one is cautioned to wear heavy gloves.

Folks who try to handle Congo eels know what "slippery as an eel" means. It is nearly impossible to hang on to one bare-handed. The result is almost always the same,—the eel shoots itself through one's hands like water squirting through a hose. They are much easier to hang on to with cotton gloves than with bare hands.

Specimens are needed to give us a better understanding of their distribution and life history. Two large eel-like salamanders are found in southeastern Virginia—the one that grows longest is the Congo eel, which has no gills protruding from the sides of its head in its adult stage. The other salamander, mud siren, has large gills as an adult. If you catch either one, you can add to the data on these unusual animals by dropping me a card telling where, when, and how you caught the specimen, how it behaved, its length, and whether or not it had gills extending from the sides of its head.

(Editor's note: The author's address is John Thornton Wood, University of Virginia, Charlottesville, Virginia.)



Windsor Shades, located between Central Garage and West Point, is believed to have been Ruffin's Tavern, of which George Washington wrote. Built in 1740 by a member of the Ruffin family. At the entrance is the site of Ruffin's Ferry.

Virginia's Historic Garden Week

By ELIZABETH H. SMITH

Photos by Phil Fournoy, V.S.C.C.

THE PASSAGE of the years has not obliterated much of the tangible as well as the intangible beauty and nobility of Virginia's great past. Despite the growth of business and industry in the Old Dominion, large and handsome estates, with their spacious homes and gardens, have lived through decades, and some even through centuries since they were established. Approximately 250 of the old and young estates in Virginia will be open during Historic Garden Week, April 26-May 3, which is being sponsored by The Garden Club of Virginia.

The Northern Neck is probably offering more "first time" places than any other section.

One of the especially interesting homes here is "Kendall Hall," at the head of Carter's Creek. It was built in the early 1920's and is of Spanish architecture. Owners are Mr. and Mrs. Thomas D. McGinnis.

Not far from Warsaw is "Epping Forest," birthplace of Mary Ball, mother of George Washington. The west side of the house which one sees today is much the same as it was when Mary Ball lived there. The mantels, wainscoting, and over-door transoms are unchanged. The smokehouse, laundry, and ice-house are original buildings. The foundations of the old kitchen and slave quarters can be seen. The east side of the home was added in 1842. Further changes were made in 1904. Until 1834, when it was purchased by the Jesse family, "Epping Forest" was successively owned by the Balls, Dowmans, Chinns, and Mitchells. It is now the property of James D. and Eoline Ball Jesse.

It was at "Epping Forest" that Col. Richard H. Lee wrote a letter to the War Office in Richmond September 5, 1781, only a few weeks before Cornwallis' surrender at Yorktown, making recommendations for efforts to clear pirates from the waters off the Northern Neck. Lee's long letter includes the following: "It seems very probable that many vessels will be captured from the enemy by the French fleet, that may be purchased from them, and which will suit admirably for cruising in the Bay, and within the mouths of our rivers, to suppress the piratical practices that will undoubtedly commence again so soon as the French fleet goes away."

Visitors to Alexandria will recall that this old seaport town grew so rapidly in the early days that at one time it was larger than the New York of that day. In Alexandria was drafted the "Fairfax County Resolves," the formal protest against English rule. Here Washington took command of the Colonial troops, and it was here that in 1799 he reviewed the local troops and gave his last military command.

Many famous old houses in Alexandria will be open. One of them is a Flounder House, now owned by Mrs. Charles Rollins. It was the home of John Fitzgerald, a colonel in the Revolutionary Army and one time mayor of the town.

One may see homes of several doctors who were famous in their time. These homes include that of Dr. William Brown, physician general and director of hospitals for the Continental Army, author of the first American Pharmacopoeia, a vestryman of



Chelsea, located near West Point, was built by Augustine and Moore in 1709. Here in 1716 Governor Spotswood organized the Knights of the Golden Horseshoe and proceeded on his memorable trip to the Blue Ridge.

Christ Church, and a leader in education; the home of Dr. James Craik, who was at the deathbeds of both George and Martha Washington, and the home of Dr. Elisha Dick, health officer for Alexandria during the yellow fever epidemic and consultant with Dr. Craik during Washington's last illness.

The Fauquier-Loudoun area includes among its offerings "Oatlands," about six miles from Leesburg, built in 1800 by George Carter, son of Robert Carter of "Nomini Hall." In 1903 "Oatlands" became the property of Mrs. William Corcoran Eustis and the late Mr. Eustis. Mrs. Eustis is the daughter of the late Levi P. Morton, minister to France from 1881 to 1885 and vice-president of the United States from 1889 to 1893. The house is of Georgian architecture. The octagonal drawing room and the great hall are of special architectural interest, having unusually fine cornices and woodwork. This is the first time "Oatlands" house has been open during Historic Garden Week.

"Morven Park," in Loudoun County, was built about 1825 by Gov. Thomas Swann of Maryland and purchased in 1903 by Westmoreland Davis who later became governor of Virginia.

The original house at "Prospect Hill," near Warrenton, was built at the turn of the Nineteenth Century by Chief Justice John Marshall for his eldest son, Jacquelin Ambler Marshall. It was destroyed by fire in 1933 during the occupancy of the present owners, Col. and Mrs. William E. Doeller. Adjacent to this site a new house was erected in 1934-35. The basic motifs of design were taken from historic Bacon's Castle on the James River. Old brick from the original house was used in its construction. The

house contains old English crystal chandeliers, paneled rooms, old doors, locks, and hinges, and from the house of Queen Anne in Hanover Square a flying stairway.

Fredericksburg, one of the most historic places in Virginia, is the site of many reminders of the city's illustrious past.

One of these reminders is "Kenmore," home of Col. Fielding Lewis and his wife, Betty, who was the sister of George Washington. Much of the success of the American Revolution is credited to the sacrifices of this couple. So heavy were the debts incurred by Lewis on behalf of his government during the Revolution that he was never able to pay off the mortgage on his lovely estate. Records indicate, however, that the place never actually passed out of the hands of the family until after the death of Colonel and Mrs. Lewis.

"Kenmore" is spacious and magnificent, both in its construction and furnishings. Its exquisite ceilings, designed by Washington, have been compared by the National Geographic Magazine with those of the Palace of Versailles.

Richmond, which has played a prominent part in American history since Capt. Christopher Newport and his party landed at the site of Richmond in 1607 until the present, offers far too much of interest for outline in detail here. On Richmond's Capitol Hill convenes the oldest continuously meeting legislative body in the New World. Not far away are the home of Chief Justice John Marshall, the White House of the Confederacy, St. Paul's Episcopal Church where Confederate President Jefferson Davis was worshiping when he received the message from Gen. Robert E. Lee that Richmond would have to be evacuated.

On Church Hill in St. John's Episcopal Church where Patrick Henry made his inflammatory speech, whose "Give me liberty or give me death" portion is quoted often. "The Lee House" and "Virginia House," shrines owned by the Virginia Historical Society, and many other shrines, will be open.

A few miles west of Richmond is "Tuckahoe Plantation," the boyhood home of Thomas Jefferson. The interior includes some of the finest hand-carving and paneling to be found in America. Its furniture is Eighteenth Century.

Beyond "Tuckahoe Plantation" is "Sabot Hill Farm." The Georgian house is built on the site of the old residence of James A. Seddon, Confederate Secretary of War. Its Chippendale wallpaper was hand-painted in China. There are Eighteenth Century locks, with original keys, throughout.

(Continued on page 22)

Virginia's Inland Fish Series

THE CHAIN PICKEREL (*Esox niger*)



“CANNIBALS OF THE DEEP” might well describe the fast moving, voracious, chain pickerel, for from the time it reaches three-inches in length it feeds upon its brothers and sisters, as well as all of the other neighboring species of fish. Few fish, regardless of size, seem to be too small or too big for the pickerel to tackle.

The pickerel is primarily a lake fish but occasionally is found in slow-moving rivers and streams. It prefers the denser cover like deep holes or pockets in weed beds, or around submerged logs and along the edges of rushes and pads. It is found mainly along the Atlantic coast, as far north as Maine, but also is caught as far west as Texas.

While this fish is a member of the pike family and is often called a pike in many localities, it is not a true pike that many people have in mind, such as the pike perch. No doubt the reason is because of the similarity of shape.

One sure way to distinguish the pickerel from other members of the pike family is by the scaling on the sides of the head. The pickerels have the cheeks and the gill covers completely scaled; the northern pike has completely scaled cheeks but only the upper half of the gill covers; the musky has scales only on the upper halves of the cheeks and gill covers.

The spawning period occurs in the spring, usually from March to April, depending upon the tem-

perature of the water. The eggs are deposited, without any prepared nest, among the weeds, brush, or limbs in the shallow water near the shore. The eggs come forth in long strings, and the number may range from 1,500 to 3,000, depending on the size of the fish. The incubation period is about fifteen days.

When on the feed, the chain pickerel will have a try at anything that has motion. Mainly, it devours minnows, frogs, insects, salamanders, and any small fish that happen upon the scene when it feels the urge to eat. This cannibalistic tendency makes artificial propagation extremely difficult.

This fish sometimes attains a size of thirty-three inches or more and a weight of eight pounds. The general average size runs around fifteen to eighteen inches, depending upon the water inhabited and the food conditions available. The official world's record is 10 pounds 10 ounces and was caught in Quebec in 1935. It takes four years for the pickerel to grow to a length of 12 inches.

Comparatively few anglers become addicted to pickerel fishing because it is seldom hair-raising, tackle-busting sport. Neither is brook trout fishing with a cane pole. But to a sportman on the operational end of light terminal tackle, the pickerel can be a sporting fish comparable with some of the best.



Virginia's Game Bird Series

THE CANADA GOOSE

(*Branta canadensis canadensis*)

THE RESONANT HONK of the Canada goose remains as one of the few links between our modern age of machines and the age of new-frontiers and wilderness living. So inspiring is the "call of the wild goose" that poets and writers of song and fiction alike have drawn heavily upon it to set the scene of wild and far-away places. Rare is the man who has heard wild geese pass overhead without a tinge of nostalgia and an urge to go with them on their spring migratory flight to the north country.

The Canada goose is the largest of our six species of geese, measuring from 35 to 43 inches in length and weighing up to 14 pounds. It arrives in Virginia in early October and remains here until around mid-April.

Swimming on the surfaces of quiet waters in stately fashion, this three-foot honker maintains a constant air of dignity. It feeds on vegetation growing on the bottom of shallow ponds by bending its long neck under the surface. As it plucks the greenery from beneath the water-surface it virtually stands on its head, and its tail is all that protrudes from the water. However, the Canada goose is largely a grain and grass feeder.

These big birds breed in the prairie provinces of Canada and the northern central states, and winter from southern Canada through the United States and into Mexico.

Normally the mother goose hatches her five to nine eggs while father gander stands by protectively. He will lay down his life in defense of his family. As quickly as the young geese are hatched they are able to walk about and swim, at which time both parents begin to molt.

Geese, like floods, forest fires, and erosion, are little concerned with boundary lines, whether they be international, national, state or private. They are no more concerned with the Canada-American boundary line than they are with the boundary line between the properties of Joe Brown and John Jones. Where there is food, water, and protection, they will be found. We, here in Virginia, almost lost the brant, when the eel grass, the main food in the diet of the brant, was killed out by a blight. However, with the return of the eel grass, the numbers of brant increased such that last year Virginia held the first brant season in several years. It illustrates a point to be considered. The brant was once found by the thousands on the Eastern Shore, but then, practically overnight, it became scarce. The same thing could happen to the Canada goose, or to any of our waterfowl species. Take away its food, drain or burn the marshes, pollute its waters, or fail to protect it properly, and it too could go the way of the brant. It could happen if we should relax our conservation efforts.

FEDERAL AID

(Continued from page 7)

Virginia has acquired the excellent Hog Island Refuge on the James River. Tennessee and Alabama are bringing ducks and geese back to the TVA reservoirs. Arkansas has purchased a splendid 40,000-acre area in the timbered bottomlands of the Bayou Meto to serve for public hunting of ducks, deer, turkey, and squirrels.

There is no other kind of game restoration project nearly so impressive as a waterfowl project. Spectacular flights of ducks and geese on an attractive marsh are evidence of success which wins instant public acclaim. Duck hunting is generally possible only for the club member or owner of good shooting property. There is urgent need for some areas in every state where waterfowl properties are managed for public shooting. These are slowly but surely being provided through P-R projects.

Fundamental to the management of our game resources are the many and varied research projects which have been conducted in the Southeast by P-R. The results show how to increase the game and how to control the harvest through wise hunting regulations. To produce a better automobile or an atomic bomb requires the "know-how" which is provided by research. We need the same, common-sense approach in game and fish management.

I am happy to say that, with the impressive accomplishments of P-R we can now look forward to a similar record in the new Dingell-Johnson fish restoration work. Our states have 20 fisheries projects approved. Many are research projects. They deal with streams, farm ponds, small lakes, and big reservoirs. Some will control rough fish and others will eliminate water hyacinth. Trout in the cold waters of mountain streams and in the tail-waters of deep reservoirs will be the subject of investigation. More know-how leads to better fishing, and that's what we all hope for.

BEFORE THE DOGWOOD BLOOMS

(Continued from page 9)

in casting very light lures with the conventional types of casting rods. When the fish start "looking up," and taking surface lures, the fly rod is incomparable.

Where to go to usher in the spring fishing season has been determined by most of us in advance. The average city person would be amazed at the numbers of men, women, and children who line the banks of the rivers and creeks of the state just as soon as it warms up even a little bit.

It's panfish that most of these people are after and, luckily, there are plenty of them in Virginia's waters. The mood is for the little fishes, and who cares about the whales and piscatorial behemoths? The urge for the first nibble, or the first flashing strike is in the blood of a lot more Virginia people than one might suppose.

There are a lot of manias that possess us once in a while. The opening of the baseball season, or the football season! Or the hunting season! The lid off for the bass season and the trout season! None of these get quite so completely in the blood of the average Virginian as open weather in early spring and the expeditions to the fishing waters.

GARDEN WEEK

(Continued from page 19)

Lower James River Plantations, North Side, include "Riverview Farm," "Shirley," "Berkeley," "Westover," and "Evelinton."

Plantations on the Lower James, South Side, include "Brandon," "Upper Brandon," "Eastover," and "Smith's Fort Plantation." The house on the last named place was built in 1652 on land given by Powhatan to John Rolfe upon his marriage to Pocahontas. The grounds were restored by The Garden Club of Virginia. The owner is the Association for the Preservation of Virginia Antiquities.

Among the offerings in the Gloucester-Mathews District is "Elmington," home of Thomas Dixon who wrote many of his books there. The present house was built in 1848 by John Tabb of White Marsh as a wedding gift to his son, Dr. John Prosser Tabb. Dixon remodeled it in the late 1890's. The estate is noted for its magnificent magnolias and broad lawn which sweeps to the North River.

It was on the Eastern Shore of Virginia that the first permanent English settlers first set foot on the North American continent. One of that band of Englishmen was Thomas Savage who later made his home on the Eastern Shore. On part of the tract of several thousand acres given him by Debedeavon, "Laughing King" of the Indians, was built, in 1799, "Elkington," near Eastville. Its paneling and scenic blocked wallpaper are of special interest, and its furniture is in keeping with Eastern Shore tradition of Colonial times.

Space here will not permit a description of all the homes, churches, and other shrines which await visitors during Historic Garden Week. However additional information about any of these places may be obtained by writing to Historic Garden Week, Room 3, Hotel Jefferson, Richmond 19, Virginia.



HOMES FOR WILDLIFE

"Woodsmen, spare that den tree!" is suggested by the tag reproduced here, which the directors of the Benzie (Michigan) Soil Conservation District provide for land-owners.

Because woodland and wildlife areas make up over 40 per cent of the planned land use in the district, wildlife management is highly important. The district recommends that an average of two den trees per acre be left standing—hollow trees which are now or may become the homes of squirrels, raccoons, a variety of birds, and other wildlife.

The tags are used by technicians, the county agent, directors, land-owners, and others to mark trees that should be left for den trees in the process of working out the complete farm plan.

The directors of the District—Donald Gray, Verne Hopkins, Ellsworth Esch, Roscoe O'Brien, and Eugene Stone—have wildlife and woodland management interests, as evidenced by their five farms, totaling 2,400 acres, of which 1,011 acres, or 42 per cent of the land, are classified as woodland and wildlife.

LEAVE THIS FOR
A
WILDLIFE
DEN TREE

Owner _____

Cooperating with
Benzie Soil Conservation District

THE JAMES RIVER

While on vacation in Goshen Pass, I rambled through my copy of "The James River Basin" and by chance stumbled on the geology

section. In imagination I boarded the plane with Professor Stowe and followed the James River from its humble birthplace on the side of a ridge in Highland County, on its long winding trek for 335 miles past Covington, Clifton Forge, Iron Gate, Eagle Rock, Buchanan, Big Island, Lynchburg, Bent Creek, Scottsville, Bremono Bluff, Rock Castle, Richmond and on into the ocean at Hampton Roads. The trip was so exciting and breath-taking that I decided to do some rambling on my own.



Commission photo by Shomon

The upper reaches of the James River.

Then the thought occurred, why not visit that humble spring-house on you mountainside that was the beginning of Virginia's largest and longest river within state lines, and watch it as a bouncing baby brook start its long journey to the Atlantic.

So we went over the mountain from Goshen and finally reached the quiet little county seat of Monterey. There we followed Route 250 as it climbed another mountain and then dropped down into the Blue Grass district and Hightown. Believe it or not, Hightown has the highest elevation of any postal town in Virginia. About a half mile past High-

town, 250 swings to the right as it continues on to West Virginia. Straight ahead on the ridge, before the road turns, is a barn. 'Tis said that the water falling from the left side of the roof flows into the James and from the right side into the Potomac.

In the field on the left is a spring-house covering the real headwaters of the mighty James. A short distance away is another spring, which is the beginning of the Potomac River.

As I watched the cold crystal clear waters gushing from that spring on the left of the road and starting down through the pasture, a mere branch easily stepped over, I thought of it at Newport News with the 4½-mile James River Bridge across it.

That's it, folks. I had seen the birthplace of the James and found that "Little spring branches into mighty rivers grow."

—"Scally" Maurice

MARCH AUTHORS

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JOHN THORNTON WOOD, *The Congo Eel*, prominent Virginian biologist associated with the University of Virginia, Charlottesville.

ELIZABETH H. SMITH, *Virginia's Historic Garden Week*, is the feature writer for *The Garden Club of Virginia*, Richmond.



Youths Aid in Conviction of Dynamiters

Warden Duval Conner of Appomattox County recently reported the results of a dynamiting case in his county. Some time ago three violators were observed dynamiting fish on Rack Island Creek. The incident was reported to Warden Conner, and, after some fruitful detective work, the offenders were arrested and summoned to court.

In trial justice court the violators were fined \$200 each, in addition to costs. However, the entire case was appealed to circuit court of Appomattox County. At this circuit court, in early December, the judge fined each of the dynamiters \$200 and costs, making a total fine of over \$700. In addition, each of the men was required to serve an immediate 30 day jail sentence. Jail sentences have been served and fines and costs have been paid.

The significant part of the entire case was the fact that two young boys had witnessed the violation, and had the moral courage to give the information to warden Conner. How many adult sportsmen would have done the same under similar circumstances?

Squirrels Have Feelings Too

The following is a true account of an incident that happened December 24, 1951, in Surry County, on the property of the Southwark Hunt Club, submitted by William B. Trafton, Portsmouth, Virginia.

"Mr. Kent Barnette and I were squirrel hunting on Christmas Eve. After hunting all morning we returned to our automobile to eat lunch and to deposit our kill of squirrels. Both he and I placed our game in the trunk of the car, Mr. Barnette also put his shotgun in the trunk along with the squirrels. We then sat down to eat lunch. While eating we heard a noise in the car, which we paid little attention to, at first, but after hearing it again and each time a little louder we decided to investigate. Upon opening the trunk we found a squirrel, which had apparently been only stunned, now very much alive. That squirrel had chewed up the stock of an L. C. Smith double something awful. Needless to say, when we got through with him after this he was more than stunned. We couldn't find any reason for that squirrel trying to eat the gun unless he just didn't want us shooting any more of his brothers and sisters."

10,000 Valley Students in Soil Projects, Supervisors Live the Way They Preach

The youth of today will be the caretakers of the soil tomorrow.

No one realizes this better than the supervisors in Virginia's Lord Fairfax Soil Conservation District. For the past six or seven years they have sponsored a soil conservation program for the 10,000 boys and girls in the schools of the district with increasing participation from year to year.

"Youth molds its future as it saves the soil by which we live" proved to be one of the most motivating themes. Pupils have used in class rooms of some 40 schools more than 25,000 pieces of soil conservation literature. They have distributed much of this literature to the 5,000 farm homes and to others of the district from year to year. About 20 per cent of the farmers have, in cooperation with the district, developed soil and water conservation plans for their farms.

Pupils were responsible for the planting of almost 200 wildlife borders to shrubs and trees the past spring. Their slogans: "Wildlife needs the help of the 10,000 boys and girls in the schools of the district. Wildlife borders for erosion control and more and better wildlife habitats on farms of the district."

Active in the conservation program in the district are supervisor Bryan A. Hepner, Maurertown, who



Photo courtesy S. C. S.

Students from Strasburg School were but a fraction of the 10,000 boys and girls from 40 schools cooperating with the Lord Fairfax Soil Conservation District to save soils, waters, and wildlife.

practices what he preaches in the field; Elmer Richards, the Game Commission's technician in the district; and E. C. Koontz, district soil conservationist for the Lord Fairfax Soil Conservation District.

Chickahominy Bass Aid Relaxation

Tom Robinson of the Virginia Peninsula Sportsman's Association, Hampton, Virginia, went fishing



Photo by Tom Robinson

Eight bass taken by Tom Robinson, of Hampton, from the Chickahominy. The largest (center) weighed 7½ pounds.

in the Chickahominy last December just for the relaxation. The bass were very cooperative in helping him relax, as shown by the picture. He caught eight bass, with the three largest ones weighing 7½ pounds, 4½ pounds, and 4 pounds, respectively. Not a bad way to relax, we'd say.



Photo by Leonard A. Durnier

Panel of experts. Reading from left to right: Byron Rudacille, William J. Coffman, J. W. Simpson, E. Keith Monnington, Webb Midyette, Claude Jones, moderator, and conservation officer Fred Hottle.

Midyette, Guest of Warren County Round Table

During a weekly radio program sponsored by the Warren County Fish and Game Protective Association of Front Royal, Virginia, in cooperation with Bill's Sporting Goods Store of Front Royal, Webb Midyette, supervising warden of the northwest district, appeared as a guest and answered questions regarding the set-up and operation of the Game Commission.

This panel of "experts" answers questions, submitted by mail or telephone, pertaining to hunting, fishing, game and fish laws, and conservation in general.

The panel is made up of personnel from the Warren County Game and Fish Protective Association and on each program there is a guest who discusses some particular phase of natural resource use and conservation.

1952 Food and Cover Contest

The Prince William County Chapter of the Izaak Walton League of America is sponsoring a contest to reward those who plant and cultivate the best food and cover patches for game birds in Prince William County during 1952. The contest is an important part of the program of the county chapter of the Izaak Walton League to improve living conditions for wildlife in that county.

Entrants should be prepared to plant not less than one-eighth of an acre. The patch should be located next to woods or a fence-row. It should not be located inside a grazing area, as cattle will eat the plants. The recommended combination is of bicolor lespedeza, sericea lespedeza, and game bird mixture.

The County Chapter of the Izaak Walton League will undertake to furnish all the plant and seed necessary for the first fifty (50) contestants—as determined by the postmarks on the envelopes submitting the entry blanks. Arrangements have been made to have the patches judged by out-of-county conservationists, so there will be an impartial job.

Prizes are as follows: 1st—a Featherlight Ithaca Repeater 12-gauge Shotgun (model 37), with 30-inch barrel and full choke (value: \$95), 2nd—a Remington .22 cal. semi-automatic rifle (model 550), with 500 rounds of .22 long rifle ammunition (value: \$50), 3rd—a single-shot Winchester 12-gauge Shotgun (value: \$30), 4th—a Single-shot Stevens 16-gauge Shotgun (value: \$25), 5th—a Fibreglass J. C. Higgins Casting Rod (value: \$10), and A Fine Casting Reel (value: \$10). 6th—a Fine Casting Rod (value: \$10).

The closing date for entering the contest is May 1, 1952.



for
Students
Teachers
Parents

Wildlife Ramblings

With March comes springtime, and with springtime the animal world comes to life. Now is the time to observe Nature at work. Perhaps the most interesting of the animal life which can be observed are the amphibians, such as toads, frogs, and salamanders; for they can be observed as well in the classroom as they can in the field. Let's take a look around and see what we mean.

It is possible to find pools filled with egg masses of frogs, toads, and salamanders. These egg masses can be collected in restricted numbers and brought into the classroom. Small glass jars make suitable containers for keeping them during their incubation period. However, pond water should be used, rather than city water.

One of the most inexpensive aquariums that can be used in a classroom is a glass gallon-jar. This jar should be placed in the shadows so that no direct sunlight will shine on it. If it is placed in sunlight the water will become too warm for the incubation of the eggs.

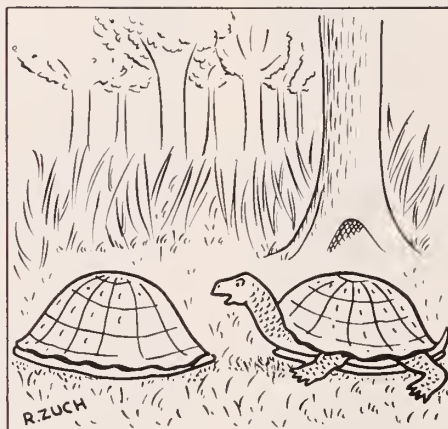
The hatching and the development of the young amphibians can easily be observed in the classroom. In many of the species it is possible to observe the entire series of changes from the egg to the tadpole to the frog. Also, the young salamanders can be carefully watched, with emphasis on the use of the external gills in early stages of life.

As soon as the hatching takes place in the aquarium, the large numbers of young should be separated into smaller groups. If this is not taken care of immediately, the majority of the animals will die.

Feeding these tadpoles and young salamanders is very simple. Tulip leaves will serve as food. It will be necessary to peel off the thin layer covering the

leaves to expose the fleshy part of the leaf. If this type of leaf is not available, it would be wise to collect stones which have a coating of algae, and this will service as food for the growing animals. It is necessary for tadpoles to scrape their food from a solid object because their teeth are located on the outside of their mouth.

These observations can be carried further by actual study of the parents of the young collected. It is possible to extend this work into both recognition of various species and their value to the citizens of Virginia.



"You look all in today!"

Being an authority on these forms is not necessary. The *Field Book of Natural History*, by E. L. Palmer, will give a wealth of information concerning these animals.

BIRD OF THE MONTH

The Purple Martin

He is not the earliest to arrive; the robins have beat him to it, as well as many of the hardy blackbird family. And certainly he is no accomplished singer. But when we hear the well-remembered, happy "twittering", and look up and see him and one or two of his fellows circling in the air, and, watching, we see him "land" on the box and flirt his wings and

switch his tail.—then we know that spring is here; the purple martin is back again.

This bird winters in the great Amazon Valley of Brazil. In spring migration he reaches our Gulf Coast about February 1; but it is not until three months later that he and his fellows are established over their summer territory, the whole of the United States and the southern half of Canada. With us in Virginia we may look for him after March 15. My earliest record in Dinwiddie County is March 13. By this time, of course, starlings are nesting in the "martin box." Do not worry; just watch the fun. English sparrows are harder to dislodge. A pair may last the season with the martins.

The great enemy of the martin is a long-continued spell of bad weather. Wind and rain play havoc with its food supply (insects), and many young, and sometimes older ones, starve. Man is not his enemy. With men the martin is almost universally popular. Occasionally someone will complain that martins destroy his honey bees. But the writer will not soon forget seeing two young men using purple martins as targets for their high-powered rifles.

Martins are noisy. But theirs is a "happy noise." Then one day about the middle of July you will realize suddenly that the sounds around the martin box have ceased. Yes, the birds have gone. For a few weeks they may be seen feeding over a pond or nesting in long lines on telephone wires. Possibly you may find a "roost" of thousands of these birds. Then they disappear. My own latest record for this species is the third week of August. During October and November they are taking off from our southern border, crossing back over the Gulf of Mexico to their winter home in Brazil.

Watch this month for the first arrivals of the purple martin.

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